CITY OF CASA GRANDE, ARIZONA

NOTICE OF BID

The City of Casa Grande will receive sealed bids for the following:

PHOTOVOLTAIC POWERED IN PAVEMENT LIGHTING SYSTEMS WITH RADIO ACTIVATED ADVANCE FLASHING BEACON SYSTEMS

Each bid shall be in accordance with the specifications and instructions on file with the City Clerk at City Hall, 510 East Florence Boulevard, Casa Grande, Arizona, 85222, where copies can be obtained by calling the City Clerk's Office (520) 421-8600.

All bids must be submitted by **April 28, 2009** at **1:30 pm**, City time to the City Clerk, Gloria Leija, 510 East Florence Boulevard, Casa Grande, Arizona 85222. The bid opening will take place on April 28, 2008 **1:30 pm**, Main Conference Room (2nd Floor), 510 E. Florence Boulevard, Casa Grande.

Bids must be addressed to:

Gloria Leija, City Clerk
City of Casa Grande
510 E. Florence Boulevard
Casa Grande, Arizona 85222

The envelope must be boldly marked:

BID ON PHOTOVOLTAIC POWERED IN PAVEMENT LIGHTING SYSTEMS WITH RADIO ACTIVATED ADVANCE FLASHING BEACON SYSTEMS FOR THE CITY OF CASA GRANDE
BID OPENING: April 28, 2009, at 1:30 PM

The City of Casa Grande reserves the right to waive any informalities or irregularities in this Request for Bids, or to reject any or all bids; to be the sole judge of the suitability of the materials offered, and to award a contract or contracts for the furnishing of one or more items of the services it deems to be in the best interest of the City.

James V. Thompson
City Manager

INFORMATION TO BIDDERS

I. SECURING BID DOCUMENTS

Specifications and other bid document forms are available at the City Clerk's Office:

Gloria Leija, MMC
City Clerk
City of Casa Grande
510 E. Florence Blvd.
Casa Grande, Arizona 85222
(520) 421-8600

II. ADDITIONAL INFORMATION

Alonzo Lopez
Signal Light Technician
City of Casa Grande
510 E. Florence Blvd.
Casa Grande, AZ 85222
(520) 421-8600
Extension: 4830

III. CONTENT OF BID

The Bid package should contain the following:

* Call for Bids Notice
* Information to Bidders
* General Information/Bid Specifications
* Bid Form
* Check List (If applicable)
* Certification of Bid

IV. INTERPRETATION OF DOCUMENTS

If any person contemplating submitting a bid is in doubt as to the true meaning of any part of this Request for Bids, or finds discrepancies in or omissions from the specifications, the bidder may submit to the City Clerk, a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the proposed documents will be made only by Addendum duly issued by the Department, and a copy of such Addendum will be mailed or delivered to each person who received a Bid Packet. All Addendums will be forwarded to the City Clerk's Office to be

included in the Original Bid Packet. The Department will not be responsible for any other explanation or interpretation of the Request for Bids.

V. ANY ADDENDUMS OR BULLETINS

Any addendums or bulletins issued by the Department during the time of bidding or forming a part of the documents provided to the bidder for the preparation of the bid shall be covered in the bid and shall be made part of the contract. ***No addendums will be issued five (5) days prior to the bid opening.***

VI. WITHDRAWAL OF BIDS

Any bidder may withdraw his bid, either personally or by a written request, at any time prior to the scheduled time for the opening of bids.

VII. ECONOMY OF PREPARATION

Bids should be prepared simply and economically, providing a straightforward, concise description of the bidder' capabilities to satisfy the requirements of these guidelines. The bidder shall be responsible for costs incurred in the proposal preparation and delivery.

VIII. SCHEDULE

The following schedule is planned:

Call For Bid:	**March 23, 2009**
Mail Request For Bids:	**March 23, 2009**
Last Date to Submit Bids:	**April 28, 2009**
Bid Opening:	**April 28, 2009**
Bid Review:	**April 28-May 1, 2009**
Bid Award:	**June 1, 2009**

IX. EVALUATION PROCESS

Bids that are judged by the City to be unresponsive or materially incomplete will be immediately rejected.

Finalists will be selected from the remaining bidders.

The City will perform whatever research it deems necessary into the bidder's history, financial viability and references. The bidder shall cooperate with the **Streets Division of the Public Works Department** by providing appropriate informati

X. EVALUATION CRITERIA

The primary evaluation criteria shall be the overall benefit/cost as perceived by the **Streets Division of the Public Works Department**, rather than cost only.

The **Streets Division of the Public Works Department** shall consider many factors, including the following (which are not in any specific sequence):

* Responsiveness to the needs of the Department
* Bidder's qualifications
* Quality of Product
* Quoted price

XI. MULTIPLE BIDS

Bidders may submit multiple bids if they so desire. Such multiple bids will be evaluated separately on their own merits.

XII. REQUIREMENTS

The City has established certain requirements as specified in the General Requirement/Bid Specifications. None of these requirements are designed to give any bidder an advantage or disadvantage in the bidding process. Bidders are encouraged to bid even if the bid does not meet the requirements as stated. However, the bidder must state specifically which requirements are not met, how the same function may be otherwise performed, and why this deviation should not be considered material. The City's determination that a deviation is not material does not excuse the bidder from full compliance with other specifications if he is awarded the contract.

XIII. METHOD OF PAYMENT

Bidder should submit billing statement to the attention of the Finance Department. When applicable the bidder should reference on the billing statement the purchase order number or City contract number. The City of Casa Grande makes every effort to generate payment for claims within 30-days from initial request.

XIV. DELIVERY OF PRODUCT/COMPLETION OF WORK

Upon receiving Notice of Proceed or Purchase Order Number, Bidder shall **deliver the Photovoltaic Powered In Pavement Lighting Systems with Radio Activated Advance Flashing Beacon Systems** by **the delivery schedule indicated by the bidder**.

XV. EXECUTION OF AGREEMENT

Successful bidder will be required to enter into a formal agreement that is consistent with the bid package outlined within. The bidder to whom the Contract is awarded by the City shall within 15 days after notice of award and receipt of Agreement forms from the City, sign and deliver to the City all required copies. ***(Sample of Agreement attached in bid packet – specifics may change to comply with bid specifications)***

XVI. MISCELLANEOUS INFORMATION

A. All prices quoted will reflect the total to the City for the item/project/service and shall include all applicable taxes, and other charges.

B. The City will not honor any invoices or claims, which are tendered sixty (60) days after the close of the City's fiscal year for work completed.

C. The City is not responsible for any bidder's errors or omissions.

D. All bids submitted to the City are to remain firm for a minimum period of sixty (60) days from the date the bids are officially opened.

E. The successfully bid is not officially accepted until such time as the bidder receives written notice of acceptance from the City Clerk.

F. If bidder conducts business inside the City Limits, then a business license number is required.

G. Where bidder is a corporation or other type of legal entity, bids must be signed in the legal name of the entity followed by the name of the state of incorporation or place of formation, and the legal signature of an officer authorized to bind the entity to a contract.

Specifications for Photovoltaic Powered
In Pavement Lighting Systems with Radio Activated
Advance Flashing Beacon Systems
03/03/09 Final

GENERAL INFORMATION:

The City of Casa Grande is going out for bid on the purchase of a Photovoltaic powered In Pavement Lighting Systems (IPLS) with radio-activated advance flashing beacons. The system will use L.E.D. lights embedded at the crosswalk and advance warning **8" L.E.D. flashers for efficiency.**

Two complete systems are required as outlined in this specification. It is the intent of this solicitation for the bidder to supply two complete operating systems. All incidental items are to be included under bid items cited on bid schedule. The first location is just west of the intersection of East McMurry Blvd. and Center Ave. The second location is located at the intersection of North Colorado St. and East Sunset Dr.. Both locations will serve a two lane road with left-turn/median lane and will require the same number of lamps across the road. All loads for this project should be able to run for at least 2 hours/day weekdays and up to .75 hours/day weekends.

Key Features Include:

Self-contained solar powered systems (DC) eliminate the need to connect to the power grid and eliminate the need for trenching between points in the project. Features include sealed batteries and power saving L.E.D. lighting. Each point in the system is fully self-contained with a highly integrated electronics package for ease of installation, high reliability and minimum maintenance.

EQUIPMENT AND MATERIAL SPECIFICATIONS:

Bidders shall provide pricing based on the specified qualities, performance, and warranties, of the brands listed herein. unless otherwise specified in the bid documents, deviations from specifications may not be allowed from the listed specifications herein. Alternates or substitutions will be considered if received no less than two weeks prior to bid date. Alternates or substations must be submitted with a "side by side" comparison to all elements of the specification. Failure to examine and comply with any drawings, specifications, and instructions will be at the bidder's risk and may result in rejection of the bid for failure to comply with instructions as a non-responsive bid. Equipment offered **should** be compatible with the existing equipment purchased during fiscal year 2007 & 2008 so as to minimize spares issues.

SHIPPING, HANDLING, AVAILABILITY OF ITEMS AND SCHEDULE OF DELIVERY

THE BIDDER **SHALL** INDICATE THE AVAILABILITY AND TIME REQUIRED FOR DELIVERY (AFTER RECEIPT OF PURCHASE ORDER OR PROCUREMENT CONTRACT) TO SITE OF EACH LINE ITEM. Price will be FOB the City of Casa Grande Public Works building at North Operation Center at 3181 N Lear Ave, Casa Grande, AZ 85222. No partial shipments of equipment will be accepted for this project. All requested goods must arrive as a single shipment.

PRICE WARRANTY:

The vendor **shall** maintain the prices offered in its bid for a period of ninety days from the notice of acceptance of the bid. However, the vendor shall give the City of Casa Grande benefit of any price reduction before actual time of shipment.

QUANTITY:

The quantity of goods ordered **shall** not be exceeded or reduced without written permission from the City of Casa Grande.

INSPECTION AND ASSURANCE OF COMPLIANCE:

All goods are subject to inspection and testing at place of manufacture, the destination or both by the City of Casa Grande. Goods failing to meet specifications of the order **shall** be held at vendor's risk and may be returned to vendor with costs for transportation, unpacking, inspection, repacking, reshipping or other like expenses to be responsibility of vendor.

SHALL, WILL, MUST

Indicates a mandatory requirement. Failure to meet these mandatory requirements may result in the rejection of proposal as non-responsive.

SHOULD

Indicates something that is recommended but not mandatory. If the offeror fails to provide recommended information, the City of Casa Grande may, at its sole option, ask the offeror to provide the information or evaluate the proposal without the information.

MAY

It indicates that something is not mandatory but permissible.

SPECIFIC TERMS AND CONDITIONS:

SCOPE:

The CITY OF CASA GRANDE intends to purchase **Photovoltaic Powered In Pavement Lighting Systems with Radio-Activated Advance Flashing Beacons.** The CITY OF CASA GRANDE will assemble and install the equipment as necessary.

PRICING:

Bidder **shall** complete the pricing page and **shall** present all pricing data in the precise manner requested. Price will be FOB the City of Casa Grande Public Works building at North Operation Center at 3181 N Lear Ave, Casa Grande, AZ 85222. No partial shipments of equipment will be accepted for this project. All requested goods must arrive as a single shipment.

GUARANTEE, WARRANTY:

In addition to the Manufacturers Warranties, the Bidder **shall** guarantee that the units submitted for their bid shall be new and of the latest and most improved model of current production and **shall** be of first quality as to workmanship, installation, and materials used in said units. The bidder **shall** further guarantee the units offered in their bid for a period of not less than three (3) years from acceptance date or as indicated in the specifications herein. Guarantee **shall** be to replace and install any and all parts that may break or fail in any manner because of defective material and/or workmanship, and/or installation within this guarantee period, free of all charges or cost to the City of Casa Grande at delivery point. Price **shall** include all costs for delivery to the city of Casa Grande, Arizona. In the event the manufactures warranty is less than the guarantee requirement period set forth herein, the bidder **shall** cover the additional period required with their own extended warranties that provides coverage equal to the manufacturers warranty in addition to the manufacture's warranty.

DELIVERY:

Delivery **shall** be made to: Alonzo Lopez at the North Operation Center, 3181 N Lear Ave.
Casa Grande, Arizona 85222.

BASIC SPECIFICATIONS:
For the success of solar powered systems the vendor shall adhere to certain basic solar design practices. The successful deployment of solar electric systems depends on three things:

Location- Site location is key in locating reliable solar radiation data upon which to base the system design

Load- Definition of loads which is a tabulation of all pieces of equipment and the power drawn by each piece of equipment in each mode of operation

Duty Cycle- Tabulation of average run times per day per load.

All bid respondents will be required to furnish a sizing report substantiating the solar power system design for the project. The following sections include the information regarding the solar system design specifications.

SOLAR DESIGN SPECIFICATIONS:	**COMPLY**	**YES - NO**
Site information that includes average monthly insolation on a horizontal surface, insolation at tilt, average monthly temperature at the site, elevation, latitude and longitude. The data **shall** reflect the information for the site or the nearest geographical point for which data is available. In the event that no data point exists in the vicinity of the site, sizing will be prepared for the three nearest data points available around the application site.	____	____
Load tabulation **shall** be included to detail the number, type and duty cycle of all loads in the system. If manufacturers give a range of power consumption for standard items such as LED lamps, the largest possible value of the load **shall** be used for design purposes. Operating voltage will be specified and days of the week the system is to be used.	____	____
Type of solar module to be used by model and manufacturer. Key technical data on the module such as open circuit voltage (VOC), peak power voltage (V-peak), short circuit current (Isc), and peak power current (I-peak) **shall** be provided. The electrical configuration of series and parallel modules **shall** also be specified as well as the array tilt angle through the year.	____	____
Type of battery **shall** be given by model and brand name. Technical data on the battery such as voltage and the capacity at the 100 hour discharge (C/100) rate **shall** be given. The electrical configuration of the batteries (number of series and parallel) **shall** be given. Projected days of autonomy **shall** be given with the battery information. All school zone systems **shall** show a minimum autonomy of 5.4 days with no sun, which is the statistical average recommended for the central Arizona region.	____	____

COMPLY YES – NO

The array to load ratio and projected battery state-of-charge (SOC) **shall** also be given. Minimum acceptable array to load ratio for a solar power system is 1.05 in December with no LED lamp dimming considered. A projected battery SOC **shall** be included in the report and **shall** show an SOC of 80%-100% throughout the year.

____ ____

System deratings **shall** appear in the program to cover any losses from module output mismatch loss, dirt/dust accumulation losses and wiring losses. Losses may appear as a lumped derating value but a thorough discussion of the losses must be provided. ____ ____

Failure to provide a sizing report for each type of system **shall** be considered non-responsive and result in disqualification.

GENERAL SOLAR EQUIPMENT SPECIFICATIONS:

The following sections detail the minimum system specifications for the solar power system components for both the IPLS and the advance flasher units. Items covered include the solar module, mounting structures for solar modules, batteries and system enclosures. Details for the sub-systems will follow.

System Modules:
The modules **shall** consist of 36 crystalline or polycrystalline cells in series. Cells **shall** feature an antireflective coating and a low iron glass covering. Cells **shall** be encapsulated to protect them from the environment. Each module shall feature a weather tight junction box for connecting the array output cable to the module terminals. Modules **shall** feature a minimum warranty of 5 years for power output. All modules **shall** feature an anodized aluminum frame for mechanical support. Alternate solar materials such as thin film silicon or CIS materials may be offered as suitable alternate solar materials for the modules.

A data sheet for the module to be provided with the system **shall** be part of the bid response. Failure to provide this data **shall** be considered non-responsive and **shall** result in disqualification of the response. ____ ____

Solar modules **shall** be securely mounted to a suitable top of pole or side of pole mounts structure that has been specifically designed to hold solar modules. All of the necessary hardware to install the modules to the mounts and the mount to the pole **shall** be included. Security hardware for securing the module to the mount **shall** be included along with any special tools required for the hardware. Mounts **shall** be powder coated or hot dip galvanized steel. Modules 30W or less can be installed on mounting structures constructed of mill finished aluminum with a minimum thickness of 0.25" thick material. ____ ____

System Batteries:
The system **shall** come equipped with the number and type of batteries detailed in the sizing report. The battery type **shall** be a sealed-maintenance free valve-regulated design. The battery **shall** use an Absorbed Glass Mat (AGM) to suspend the electrolyte making it immobile. Gel batteries using a thixotropic gel to suspend the electrolyte will also be considered an acceptable alternate. Acceptable battery sizes **shall** be group U1, 22, and 24 and group 27. Minimum capacity of the batteries at 25^{o}C **will** be 36, 56, 80Ah

COMPLY YES – NO

and 97Ah at the C/100 rate respectively. Batteries **shall** use a copolymer polypropylene case and cover. Non-removable pressure regulated flame arresting safety valves **shall** be standard. Rated operating temperature **shall** be from –40°C to 72°C. Batteries **shall** also feature a low self-discharge rate of approximately 1% per month at 25°C. ____ ____

System Enclosure:
The system **shall** include a single pre-wired enclosure for ease of installation. The unit **shall** be an aluminum enclosure with a minimum material thickness of 0.125" and an equivalent NEMA rating of 3R. The physical size of the cabinet **shall** be approximately 15.5" x 15.5" x 26" for a 2 battery enclosure and 15.5" x 15.5" x 40" for a four battery enclosure and either size **shall** have a mill finish. Mounts **shall** be included as part of the enclosure and **shall** be suitable for mounting to a 4.5" outer diameter pole. The enclosure **shall** also be capable of accepting band style mounts, and conduit fittings typical to such installations, if needed. The enclosure **shall** feature a minimum of one police lock with key. The keyhole for the lock **shall** have a cover attached to the door with a rivet and **shall** swing away from the keyhole so as to allow access when needed. The door **shall** be attached to the unit using a continuous stainless steel hinge that is riveted to the door using solid (not pop-rivets) and the enclosure body. The hinges **shall** be installed such that the rivets are not exposed when the door is closed. An integral rigid stainless steel rod type door stop **shall** be included in the unit so that the door can be fixed in the open position during maintenance. The door **shall** cover the entire front side of the cabinet and be constructed of a single piece of aluminum. It **shall** have a neoprene gasket around the entire edge of the door. Enclosures **shall** have three screened louvered vents on each side of each compartment. The louver screening **shall** be aluminum for longevity. An integral rain lip **shall** also be provided at the top of the main cabinet body to minimize entry of rain. An adjustable latch striker **shall** be included in the side of the main cabinet body to allow the user to adjust the pressure between the door gasket and the body of the cabinet. All wiring passing in/out of the enclosure or through the shelf **shall** pass through a bushing, chase nipple or appropriate conduit fitting to eliminate the possibility of damage to the wiring as it passes a barrier. The 2B enclosure **shall** include a single aluminum shelf of 0.125" thick material to separate the batteries from the controls thus creating two separate compartments in this style of enclosure. ____ ____

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Each battery compartment **shall** have a minimum of ½"of Styrofoam sheeting around the battery to minimize heat transfer between the batteries and the wall of the enclosure. The name of the system manufacturer **shall** be stamped on the inside of the enclosure door along with a phone number for troubleshooting assistance. A minimum of one key **shall** be required per enclosure. ____ ____

COMPLY YES – NO

SUB-SYSTEM DETAILED SPECIFIC SPECIFICATIONS:

The following paragraphs outline the specific features sought with each sub-system. The initial sections cover the IPLS power system and the later sections cover the radio-activated advance flashers

IN PAVEMENT LIGHTING SYSTEM:
System Modules:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

Logic Control Device:
The system **shall** include a logic control device designed to run all timing parameters, keep count of the number of valid activations received and monitor the system for basic faults such as loss of radio link. The logic device **shall** include a 4 line by 12-character back lit LCD display. The device **shall** be capable of displaying a minimum of six different messages to help the user determine the status of the system. Messages are displayed on the screen based on the priority that they are given in the software. If two logic states exist that have user messages occur at once, and then the highest priority message **shall** be displayed. The user **shall** be able to view all of the messages currently being displayed by scrolling through the displays with the up down arrows to the right of the screen as these moves through the messages in their priority level. ____ ____

When triggered by a push button input, logic high level input, the unit will commence operation. The LCD screen **shall** display the run time display message, which includes the elapsed time into the activation and the maximum programmed run time for the unit. Run time **shall** be retrigger able meaning that if another button input is received while the system is in the run mode, the elapsed time function **shall** be reset to 0 and the count started over again which has the effect of extending the run time of the unit. The normal flash rate for the lamps will be set to 50-60 flashes per minute. An optional flash mode will be available that allows the unit to flash at a rate of 50-60 flashes per minute in which one flash is on for the duration of the flash and following flash blinks the light The device **shall** allow the user to modify the timing parameters for run time and flash rate by using the LCD screen and the six user buttons on the face of the device. User activations for crosswalk applications **shall** allow for the programming of run times from 1-99 seconds in duration. The device **shall** provide a minimum of two 10A circuits form contact closure outputs to drive the flasher circuit and an auxiliary IPLS load. The device **shall** also include one analog input channel that **shall** disable operation of all loads in the event of a low battery condition. The device **shall** also be capable of accepting a memory module for field upgrade of the software thus eliminating the need for external cables or computing devices. ____ ____

The logic control device software **shall** be capable of running a self-test from a user push button located on the control panel. During the self-test mode the unit will display a message on the LCD screen indicating it is in this mode. The software **shall** also allow for one input to be a manual override function for special event use in which continuous

operation would be needed. During manual override the system **shall** display a message to this effect on the LCD screen so that the user is aware of the operational mode. ____ ____

COMPLY YES – NO

The logic control device **shall** include outputs to drive auxiliary loads such as flashing beacons or signs with embedded LED lamps. It **shall** also include the ability to control external loads such as optional audio cards. ____ ____

For crosswalk applications the unit **shall** be capable of incorporating time clock based operation of the flashers for applications such as school crossings. The upgraded software **shall** allow for a basic program to be run that provides up to 6 on cycles per day. The clock function **shall** allow up to 8 holiday skip periods per year ranging from a single day to several months. Also included in the software **shall** be up to 6 alternate schedule periods ranging from one day to several months. Alternate schedule periods **shall** allow up to 3 on cycles per day. ____ ____

Alternate schedules are used for functions such as early release days. A data sheet on the device **shall** be included with the bid submission or the response **shall** be considered incomplete. ____ ____

RADIO TRANSMITTER:
The suitable radio for this application shall be the RT-84XT1KT, radio transmitter kit with license free radio matched to existing flashers, RF cabling, NGP antenna kit and wiring harness extended range FM contact closure radio operating at 27.255 MHz as manufactured by Linear Corporation (www.linearcorp.com) or approved equal. The unit **shall** include a digitally coded address, which will be one of up to 65,000 possible combinations, to secure the communications link from the transmitting location to the flashing beacon unit. The radio transmitter unit will include a green power status lamp and a red RF transmit lamp on the bottom off the unit to allow visual verification of operation. A jumper will be included, internal to the radio to allow NC or NO contact input operation of the unit. The unit **shall** also have an option to set a status report required feature when used with a fixed transmitter. This feature ensures that the RF link between the transmitter and receiver is intact by forcing a fixed transmitter to send out a periodic heartbeat to the receiver. ____ ____

A data sheet on the radio transmitter **shall** be included with the bid response or the submission **shall** be considered incomplete.

IPLS Wiring:
The IPLS **shall** feature a color-coded wiring harness for both the lamps, buttons and the solar array output. The primary harness shall consist of a wiring assembly suitable for use with a two-button system. The harness **shall** be color-coded for ease of connection to the buttons, lamps, battery and solar array. The lamp harness **shall** consist of a wiring assembly suitable for use with a typical ILPS system to be installed on a typical 15’ pole. The harness **shall** be color-coded for ease of connection to the lamps. A 16-pin keyed locking connector **shall** be included in the harness to allow the lamps, push buttons, batteries and solar array to be disconnected from the control electronics.

COMPLY YES-NO

The connector **shall** be located approximately 13" from the end of the harness that connects to the electronics panel termination point. An integral fuse assembly **shall** be included in the common for the button leads. All connections **shall** be terminated with a crimped spade terminal for easy installation.

Wire for the harness **shall** be ASM, TEW or MTW, 300V, as a minimum. The solar array output harness shall consist of a jacketed pair of conductors. The size of the conductors will be dependent on the solar array output current. Typical wire gauge **shall** be 12, 10 or 8 and is dependent on the solar array output current with larger gauges for higher amperage solar arrays. The jacket **shall** be a UV resistant PVC or XLP material. Spade terminals **shall** be included for ease of installation. Minimum length **shall** be 15'. The internal conductors **shall** be a minimum of a PVC jacketed conductor with a 300V rating. Where appropriate the inner insulation shall be XHHW. ____ ____

A secondary sub-harness **shall** be a color-coded with a keyed connector for proper orientation of the pins. The harness will terminate on terminal block located inside the control enclosure and located behind the control panel. This terminal block will be considered as part of the secondary harness and provide connection points for field wiring from the lamp circuit and auxiliary loads. It will also provide terminations for the optional microphone and speaker drive outputs for systems using voice cards. All terminal block positions **shall** be clearly marked for ease of installation. ____ ____

System Batteries:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

System Enclosure:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

In-pavement Lighting Fixtures and Mounting Bases:
The fixture **shall** be model FI-TS550L1Y as manufactured by Traffic Safety Corporation, 3513 La Grande Blvd., Sacramento, CA 95823-1010 or approved equal. Based on the City of Casa Grande calculations and on the width of the street, the City has determined the minimum number of LED light fixtures **shall** be 6. In order to be considered equal, the alternate fixture **shall** satisfy the following requirements: ____ ____

Construction - Fixture **shall** be bi-directional and of modular design comprised with the top casting of stainless steel and the bottom casting of high tensile strength aluminum alloy. The top and bottom castings **shall** be sealed by means of a flat gasket. Fixture **shall** have a smooth shaped face projecting not more than .50" when installed in the factory provided mounting base. The fixture **shall** incorporate a self-cleaning design with an outward sloping light channel to promote drainage and facilitate maintenance with a diameter of 8" or approved equal, all mounting hardware **shall** be stainless steel. Fixture **shall** operate on 12V DC and be furnished pre-wired with a waterproof 90P plug. ____ ____

Durability - Fixture **shall** withstand a static load of 44,000 lb. without sustaining permanent deformation or cracking of materials. Fixtures, LED's, leads, gaskets, etc. **shall** be rated to withstand 300 degrees F. ____ ____

COMPLY YES-NO

LED/Light Cavity - The lenses **shall** be molded high performance optical grade glass, formed to provide a sealed fit within the fixture, and **shall** be gasketed by high-density silicone rubber. There **shall** be two lenses per fixture, one aimed at 0 degrees and the other aimed at 180 degrees, to be installed parallel to roadway centerline. The fixture's optics **shall** be pre-focused to simplify maintenance. To prevent moisture intrusion, each fixture **shall** be installed with a Schrader valve or equal system to facilitate verification that the entire assembly is sealed at the time of installation and to allow for re-testing after maintenance. ____ ____

Photometric Performance - The fixture **shall** have both daytime and nighttime visibility and **shall** produce a brightness level of 600,000 or higher candela per meter squared with yellow light from a 5-watt LED array. ____ ____

Finish - The top cover **shall** be matte finish stainless steel while the bottom cover **shall** be black powder coat or stainless steel. ____ ____

Mounting Base - Fixture **should** be installed in mounting base of high strength steel, hot dip galvanized after fabrication per ASTM-153 specifications, with a 7.25" diameter bolt circle, a .75" mud ring, and standard base depth of 10". The base **should** be supplied with a plywood cover to protect the mounting flange during installation. ____ ____

The IPLS lamps **shall** come with molded pigtail connectors. ____ ____

Warranty - Fixture **shall** be warranted by the manufacturer against defects in materials and workmanship for three years from the date of shipment in non snow plows applications. ____ ____

PEDESTRIAN PUSH BUTTON SPECIFICATIONS:

Various configurations of the pedestrian button can be deployed with the IPLS equipment. The city may select from the different configurations based on the needs of the crossing being constructed. Sections that do not cover the buttons required for the current bid should be marked N/A

Pedestrian Push Button –Minimum:
The PED push button will be a vandal resistant unit with an operating temperature range of -30°F to 165°F (-34°C to 74°C), a rated operating life of greater than 100 million operations and an operating voltage of 12-24V AC or DC. It will have minimal travel and include a visible feedback with a luminous intensity greater than 1200 mcd (ultra bright red) will be a high intensity LED built into the unit. It **shall** also feature audible feedback that sounds simultaneously with button push with different tones for press and release of 2.6 kHz and 2.3 kHz, respectively, to indicate when the button is used. It will self-reset to prevent the button from being jammed in the depressed state. The unit **shall** include a 5"x7" pedestrian push button station assembly for mounting with a universal sign indicating the path of travel for pedestrians ____ ____

Pedestrian Push Button and Housing:
The city has determined that the minimum acceptable button assembly for the project is a Bulldog$_{TM}$ momentary button from Polara Engineering (Artesia, CA) model BLDM2 with a push button frame assembly PBF5X7 is acceptable or approved equal. ____ ____

COMPLY YES – NO

ADVANCE SOLAR FLASHER DETAILED SPECIFICATIONS:

System Modules:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

Advance Flasher Solar/Flasher Controls:
The system **shall** feature an integrated control unit. The controller **shall** be solid-state unit capable of managing battery charging and load/flasher control in a single unit. Charge control/flasher circuitry built from multiple components **shall** not be allowed thereby reducing maintenance costs and spares inventories.

The charge control portion **shall** use an ambient temperature sensor to adjust the charge termination point thus prolonging battery life (temperature compensated charging). The charge circuit **shall** also employ a pulse-width-modulation algorithm for charging the batteries and be a solid-state series switch type configuration. ____ ____

Load/flasher control **shall** be accomplished using a low-voltage-disconnect (LVD) circuit to disconnect power to the flasher control circuit when battery voltage falls to a low state-of-charge (typically 20%). The flasher circuitry **shall** be all solid-state and provide two flasher outputs of at least 5A each. When flashing, the unit **shall** have an output duty cycle of 50% per lamp and **shall** be capable of 50-60 flashes per minute for each lamp. On board short circuit protection **shall** be provided. ____ ____

The controller **shall** have built in night dimming circuitry available and **shall** be programmable through the use of a removable jumper. An 8-position terminal block with all positions labeled for ease of maintenance **shall** be included. Manual switches **shall** be provided to select the lamp activation source as either Off, On or control from an external source. A switch to select between night run only and auto tracking of external light levels **shall** be included to allow continuous operation or night operation only. A status LED for charging and LVD **shall** be included on the face of the controller. The controller **shall** include an integral aluminum heat sink. ____ ____

Systems designed for areas requiring larger arrays **shall** include electronics panels designed to accommodate the higher charging currents expected. ____ ____

A data sheet on the integrated charge/flasher control unit **shall** be provided with the bid response or the submission will be considered incomplete.

Advance Flasher Radio Receiver:
The system **shall** be equipped with a wireless contact closure radio receiver. The receiver for this application **shall** be extended range FM contact closure radio operating at 27.255Mhz. The unit will include a digitally coded address, which will be one of up to 65,000 possible combinations, to secure the communications link from the transmitting location to the beacon unit. The receiver **shall** produce a contact closure output that will be fed to the logic device to activate the flasher circuit. The contacts will be NO, NC and a COM connection. When receiving, the radio will display a solid red light on the bottom of the unit in addition to a green Power LED. Each radio receiver will be capable of being controlled from multiple transmitters that

are coded the same. The radio will have and relative signal strength voltage

COMPLY YES-NO

test point to allow for field testing of the radio signal strength using an voltmeter. The receiver package will also include a 3 foot whip antenna kit and any necessary RF cables as well as RF fittings to complete this feature. The whip antenna will include a tuning screw in the top to allow for on site tuning. The unit will also have an option to set a status report required feature when used with a fixed transmitter. This feature ensures that the RF link between the transmitter and receiver is intact by forcing a fixed transmitter to send out a periodic heartbeat to the receiver. If the heartbeat is not received the receiver will express an open collector output that is tied to an input on the logic control unit. ____ ____

A data sheet on the radio will be included with the bid response or the submission will be considered incomplete.

Advance Flasher Logic Control Device:
The system will include a logic control device designed to run all timing parameters, keep count of the number of valid activations received and monitor the system for basic faults such as loss of radio link. The logic device will include a 4 line by 12-character back lit LCD display. The device will be capable of displaying a minimum of five different messages to help the user determine the status of the system. Messages are displayed on the screen based on the priority that they are given in the software. If two logic states exist that have user messages occur at once, then the highest priority message will be displayed. The user will be able to view all of the messages currently being displayed by scrolling through the displays with the up down arrows to the right of the screen as this moves through the messages in their priority level.

The device will allow the user to modify the timing parameters for run time by using the LCD screen and the six user buttons on the face of the device. Short term activations for applications such as fire stations will allow for the programming of run times from 1-99 seconds in duration and the timer will be retrigger able. The device will provide two 10A circuits form a contact closure output to drive the flasher circuit and an auxiliary load. The device will also include one analog input channel that will disable operation of all loads in the event of a low battery condition or an improper ON-OFF switch setting on the integrated charge/flasher control. The device will also include an input to monitor radio loss-of-link options that may be configured in the radios and provide a fault flash mode for such a failure. The device will also be capable of accepting a memory module for field upgrade of the software. ____ ____

A data sheet on the device will be included with the bid submission or the response will be considered incomplete.

Advance Flasher System Wiring:
All systems **shall** feature a color-coded wiring harness for both the lamps and the solar array output. The primary harness shall consist of a wiring assembly suitable for use with a two-button system. The harness **shall** be color-coded for ease of connection to the buttons, battery and solar array. The lamp harness **shall** consist of a wiring assembly suitable for use with a two-lamp system to be installed on a typical 15’ pole. The harness **shall** be color coded for ease of connection to the lamps. A seven pin keyed locking connector **shall** be included in the harness to allow the lamps, push buttons, batteries and solar array to be disconnected from the control electronics.

COMPLY YES-NO

The connector **shall** be located approximately 13" from the end of the harness that connects to the electronics. An integral fuse assembly **shall** be included in the Lamp positive wire of the harness. All connections **shall** be terminated with a crimped spade terminal for easy installation. Wire for the harness **shall** be TEW or MTW, 300V, as a minimum. ____ ____

The solar array output harness **shall** consist of a jacketed pair of conductors. The size of the conductors will be dependent on the solar array output current. Typical wire gauge **shall** be 12, 10 or 8 and is dependent on the solar array output current with larger gauges for higher amperage solar arrays. The jacket **shall** be a UV resistant PVC or XLP material. Spade terminals **shall** be included for ease of installation. Minimum length **shall** be 15'. The internal conductors **shall** be a minimum of a PVC jacketed conductor with a 300V rating. Where appropriate the inner insulation shall be XHHW. ____ ____

The secondary harness **shall** be a color-coded harness with a keyed connector for proper orientation of the pins. The harness will terminate on terminal block located inside the control enclosure and located behind the control panel. This terminal block will be considered as part of the secondary harness and provide connection points for field wiring from the lamp circuit and auxiliary loads. It will also provide terminations for the optional microphone and speaker drive outputs for systems using voice cards. All terminal block positions **shall** be clearly marked for ease of installation. ____ ____

Advance Flasher System Batteries:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

Advance Flasher System Enclosure:
See data in GENERAL SOLAR EQUIPMENT SPECIFICATIONS section above

Advance Flasher LED Lamp Elements:
All systems **will** feature LED lamps. One or two lamps **shall** be provided with the system depending on the project requirements. Size of the lamps **shall** be either 8" or 12" depending on the project requirements. All LED lamps **shall** feature optically matched LED elements for uniform color output of 590 nanometers for amber or 622 nanometers for red. LED lamp elements **shall** be made from TSAlInGaP material. Lamps **shall** incorporate multiple main circuits comprised of 4 LED elements in series. All Lamps **shall** incorporate a self-regulating circuit to accommodate input voltages from 10.5-18VDC. Surge and spike protection **shall** be included in the lamp circuit. 8" lamps **shall** contain a minimum of 148 LEDs and provide an optical output of at least 600 Candela on center. 12" DC signals lamps **shall** contain a minimum of 120 LED elements and **shall** feature an optical output of at least 1000 Candela on center. Lamps **shall** have either a clear or tinted UV stabilized acrylic lens, this shall be removable. Lamps **shall** have a viewing angle of 17.5 x 55 degrees to meet ITE specifications for beam spread (pre June 2006 standards). Data sheets **shall** be provided with the bid response or it **will** be rejected as incomplete. ____ ____

In some RF environments, we may use a Spread Spectrum radio to compensate for interference.

COMPLY YES – NO

Advance Flasher Signal Head Assembly:
All signal head assemblies **shall** be constructed of either aluminum or polycarbonate and **shall** include a tunnel visor of the same material. Signal heads **shall** be finished in yellow. The signal head assembly **shall** be supported by an upper arm assembly and include both a one-way hub and a universal hub to allow for ease of installation in the field. A lamp closure kit matching the color of the head **shall** be included as well. Signal head assemblies **shall** include a 5" louvered back plate with hardware and **shall** be installed at the discretion of the project engineer. ____ ____

Documentation:
Each system **shall** come with a complete installation and user's guide. Minimum information to be covered is as follows:

- Basic solar system theory and system overview.
- Description of all the system components and their basic function.
- Installation of a typical system including sections specifically covering pole installation, all aspects of installation of the solar power system and LED lamp installation.
- Troubleshooting and maintenance of the system.
- Complete appendices on all of the components used in the system.
- Quick start timer programming instructions.
- Complete drawings or illustrations throughout to support and clarify the text.
- Phone/FAX numbers for technical support of the system.
- All mounting poles **shall** be spun aluminum SCH 40, square aluminum breakaway base with high neck, 3/4"x18" galvanized L-anchor bolts and instructions.

Bid Schedule

Description	Qty	$/each	Extension
• IPLS Crosswalk power system with top of pole solar array as, defined in the sizing report, sealed battery per sizing report rated at the C/100 rate, wiring package, 2B enclosure with pole mounts, control electronics including timers and flashers control, fusing, module security hardware kit and documentation	2	_____	_____
• Radio transmitter kit with license free radio matched to existing flashers, RF cabling, NGP antenna kit and wiring harness.	2	_____	_____
• Traffic safety TS500 dual window in roadway lamp fixture with 5W LED lamps or approved equal and pigtail connection.	12	_____	_____
• Galvanized mounting base, 10 inch deep or approved equal with wooden installation cover.	12	_____	_____
• Molded pigtail connector mate.	12	_____	_____
• Bulldog pedestrian push button with vandal resistant design, with built in momentary LED, tone function and terminal block yellow (-Y) or green (-G).	4	_____	_____
• 14’ spun aluminum pole kit with SCH 40 pole,14”x14”x16” square aluminum breakaway base with high neck, ¾”x 18” galvanized L-anchor bolts and instructions.	6	_____	_____
• 4’ spun aluminum pole kit with SCH 40 pole,14”x14”x16” square aluminum breakaway base with high neck, ¾”x18” galvanized L-anchor bolts and instructions.	4	_____	_____
• Radio activated solar flasher power system with top of pole solar array as determined by sizing report, 2B enclosure with pole mounts and police lock, one sealed battery per the sizing report and rated at C/100, wiring package, control panel with contact closure 27.255Mhz radio receiver and SR logic package, integrated charge/flasher control with automatic night dimming, module security hardware kit. RF cable kit antenna and full documentation package.	4	_____	_____
• 8” amber DC LED beacon kit with yellow poly signal head and tunnel visor, 8” gen 2 DC LED with 148 LED elements, upper arm assembly, one-way hub with u-bolts, universal hub, lamp closure kit and 5” louvered black back plate.	8	_____	_____

Total price Extension
Each system_____ Two systems_____

LIST OF INTERESTED VENDORS

SPOT Devices Inc.
1455 Kleppe Lane
Sparks, NV 89431
P: (888) 520-0008
F: (888) 520-0007

LIGHT GUARD Systems, Inc.
2292 Airport Blvd
Santa Rosa, CA 95403
P: (707) 542-4547
F: (707) 525-6333

SOLAR TRAFFIC CONTROLS, L.L.C.
1930 E Third Street, Suite 21
Tempe, AZ 85281-2929
P: (480) 449-0222
F: (480) 449-9367

CERTIFICATION OF BID

FOR

PHOTOVOLTAIC POWERED IN PAVEMENT LIGHTING SYSTEMS WITH RADIO ACTIVATED ADVANCE FLASHING BEACON SYSTEMS

Bidder hereby certifies by signing and submitting this bid, which includes Notice of Bids, Information to Bidders, Bid Specifications, Bid Form, and Certification of Bid, that they have read and fully understand, and will comply with said invitation for bids.

Corporate Name _____

Address _____

City, State, and Zip _____

Type of Entity _____

State of Incorporation _____

Phone Number _____

Casa Grande Business License Number (if Applicable) _____

Signature of Authorized Officer _____

Print Name of Authorized Officer _____

Title of Authorized Signatory _____

BID FORM

PHOTOVOLTAIC POWERED IN PAVEMENT LIGHTING SYSYTEMSWITH RADIO ACTIVATED ADVANCE FLASHING BEACON SYSTEMS

Cost

Bid Price	_____
Applicable Tax	_____
Net Bid Price	_____

Total Price FOB Casa Grande _____

C.G. Contract No. _____

City of Casa Grande
and
ZZZ, Inc.
Agreement

I. INTRODUCTION

This agreement (hereinafter referred to as the "Agreement") is entered into by and between the City of Casa Grande, Arizona, a municipal corporation (hereinafter referred to as the "City") and ZZZ, Inc., an Arizona corporation (hereinafter referred to as "Bidder").

II. EFFECTIVE DATE

This agreement shall be effective as of the date that the last representative for the parties executes this Agreement.

III. RECITALS

A. WHEREAS, the City issued a Request for Bids for a 2004 Chevrolet, model xxx, one-ton pickup truck; and

B. WHEREAS, Bidder was the lowest responsible bidder which responded to the City's Request for Bids, and

C. WHEREAS, The Casa Grande City Council has, by Resolution # 9999, accepted the Bidder's response and authorized the execution of a contract with the Bidder in accordance with the bid response;

NOW, THEREFORE; in consideration of the mutual promises and agreements contained herein, the parties agree as follows:

IV. TERMS AND CONDITIONS

A. Within 30 days from the issuance of the City's Purchase Order, the Bidder hereby agrees to provide and deliver the 2004 Chevrolet, model xxx, one-ton pickup truck as specified in the City's Request for Bids (attached hereto as Exhibit 1 and incorporated herein by this reference) and the Bidder's Response thereto (attached hereto as Exhibit 2 and incorporated herein by this reference) at the cost of $xx,xxx.xx», including any applicable sales taxes.

B. The Bidder shall indemnify and hold the City, its successors and assigns, harmless from and against all claims and all costs, expenses (including reasonable attorney's fees) and liabilities incurred in connection with all claims, including any action or proceeding brought thereon, arising from or as a result of the death of, or any accident, loss, injury or damage whatsoever to, any person, or to the property of any person, occurring on or about the provision and delivery of a 2004 Chevrolet, model xxx, one-ton pickup truck, and caused by, due to and/or arising from the acts or omissions of the Bidder, its successors, assigns, agents, employees,

invitees or licensees

C. The Bidder agrees to provide evidence of any performance bond or payment bond if specified in the City's Request for Bids within the time period specified therein.

D. The Bidder agrees to provide, to City Clerk's Office at the City's address in Subsection V(P), evidence of any liability insurance required in the City's Request for Bids within the time period specified therein.

V. GENERAL PROVISIONS

A. Recitals. The Recitals set forth at the beginning of this Agreement are hereby acknowledged and incorporated herein and the parties hereby confirm the accuracy thereof.

B. Relationship. This Agreement shall not be construed as creating a joint venture, partnership, or any other cooperative or joint arrangement between or among the parties, and it shall be construed strictly in accordance with its terms.

C. Mandatory Signature. This agreement shall become binding on and enforceable against the City of Casa Grande only after acceptance by the Casa Grande City Council and execution by the Casa Grande City Manager whether or not contract negotiations were conducted by the City Manager or any other agent of the City of Casa Grande.

D. Integration. This contract, including all incorporated documents, components, attachments, addenda, exhibits, and plans, constitutes the entire agreement between the parties pertaining to the subject matter contained herein. This Agreement supercedes all prior and contemporaneous agreements, representations and understandings of the parties, oral or written. No supplement, modification or amendment of this Agreement shall be binding unless in writing and executed by both parties.

E. Equal Treatment of Parties in Interpretation of Agreement. This Agreement is the result of arms-length negotiations between parties of roughly equivalent bargaining power and expresses the complete, actual, and intended agreement of the parties. This Agreement shall not be construed for or against either party as a result of its participation, or the participation of its counsel, in the preparation and/or drafting of this Agreement or any exhibits hereto.

F. Construction. Captions and paragraph headings used in this agreement are for convenience only, are not a part of this agreement, shall not be deemed to limit or alter any provisions of this agreement, and shall not be deemed relevant in construing the agreement. When used herein, the terms "include" or "including" shall mean without limitation by reason of the enumeration. All grammatical usage herein shall be deemed to refer to the masculine, feminine, neuter, singular, or plural as the identity of the person or persons may require. The term "person" shall include an individual, corporation, partnership, trust, estate, or any other entity. If the last day of any time period stated herein shall fall on a Saturday, Sunday, or legal holiday in the State of Arizona, then the duration of such time period shall be extended so that it shall end on the next succeeding day which is not a Saturday, Sunday, or legal holiday in the State of Arizona.

G. Additional Acts and Documents. Each party to this agreement agrees to do all things, take all actions and to make, execute and deliver such other documents and instruments as shall be reasonably requested to carry out the provisions, intent and purpose of this agreement.

H. Authority to Bind Party. The individuals executing this Agreement on behalf of each party represent and warrant that they are duly authorized to execute and deliver this Agreement on behalf of their respective parties.

I. Waiver Not Implied. No waiver by either party of any portion of this agreement or any breach by either party shall constitute a waiver of any other provision, whether or not similar, or of any subsequent breach of the same or any similar provision. Except as expressly provided in this agreement, no waiver shall be binding unless executed in writing by the party making the waiver. Each party specifically waives notice of default and right to cure said default unless specifically provided for in the Agreement.

J. Timely Performance. Time is of the essence for the performance of all conditions and obligations under this Agreement.

K. Governing Law/Choice of Forum. This Agreement and the rights, duties, and obligations of the parties hereto shall be governed by and construed in accordance with the laws of the State of Arizona, and any controversy, dispute or litigation shall be brought or commenced only in a court of competent jurisdiction in Pinal County, Arizona (or in the United States District Court for the District of Arizona if, but only if, the appropriate court in Pinal County lacks or declines jurisdiction over such action). The parties irrevocably consent to jurisdiction and venue in such courts for such purposes and agree not to seek transfer or removal of any action commenced in accordance with the terms of this paragraph.

L. Prevailing Party's Costs. The parties agree in the event of a breach of this contract, the non-prevailing party will pay the other party's reasonable expenses, including, but not limited to, expert witness fees, and reasonable attorney fees incurred because of the breach, whether a lawsuit is instituted or not.

M. Severability. If any provision of this agreement is declared void and unenforceable, such provision shall be deemed severed from this agreement which shall otherwise remain in full force and effect. Further, if any such provision may be reduced and/or narrowed in scope or the like, such provision shall be reduced, narrowed, and/or the like, and so enforced. The same shall apply to any portion of any provision.

N. Prohibition on Assignment. The Bidder agrees it will not transfer or assign any obligations, duties, rights or benefits under this contract to any person or entity without express written permission of the City. Permission of City may be withheld with or without cause.

O. Cancellation for Conflict of Interest. This Agreement is subject to the cancellation provisions for conflicts of interest pursuant to A.R.S. §38-511.

P. Notices. All notices required or permitted to be given hereunder shall be in writing and shall become effective upon personal service or seventy-two (72) hours after being deposited in the United States mail, certified or registered mail, postage prepaid, addressed as shown below or to such other address as the parties have designated and acknowledged in writing.

City of Casa Grande	ZZZ, Inc.
ATTN: Office of City Manager	ATTN: xxx
510 East Florence Boulevard	111 Anywhere Street
Casa Grande, Arizona 85222	Tucson, AZ 88888

We, the undersigned, have executed this document on the dates below written and hereby swear and affirm that we are duly authorized in accordance with law to execute this document.

CITY OF CASA GRANDE, an
Arizona municipal corporation

_____
James V. Thompson, City Manager
Date: _____, 2008.

ATTEST:

_____
Gloria Leija, City Clerk

APPROVED AS TO FORM:

_____
Brett Wallace, City Attorney

ZZZ, INC., an Arizona corporation

_____
typed name of signatory:
signatory's title
Date: _____, 2008.

State of Arizona)
) ss
County of Pinal)

City Manager
Acknowledgement

On this ____ day of _____, 2008, James V. Thompson who acknowledged himself to be the Casa Grande City Manager personally appeared before the undersigned and that he, as such City Manager, being authorized to do so, executed the Agreement between Bidder and the City (identified in City of Casa Grande records as C.G. Contract no. _____) in the capacity therein stated and for the purposes therein contained by signing his name.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public

My commission expires:_____

State of Arizona)
) ss
County of _____)

ZZZ, Inc.
Acknowledgement

On this ____ day of _____, 2008, _____, personally appeared before the undersigned, and that he/she executed the Agreement between Bidder and the City (identified in City of Casa Grande records as C.G. Contract no._____) in the capacity therein stated and for the purposes therein contained by signing his/her name.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

_____
Notary Public

My commission expires:_____